

1. Device (1) for melting and conveying material,
such as plastic or metal,
including a conveying channel (5)
which contains an admission opening (9) for the material,
5 as well as a discharge opening (10) for the at least partially molten
material
and including heating devices (12) which heat the conveying channel (5)
and/or material between the admission opening (9) and discharge opening (10),
and including a slide (6) which is reciprocally movable so as to convey
10 the material from the admission opening (9) to the discharge opening (10)
characterized in
that the conveying channel (5) is of tubular and double-walled design,
with an internal tube (3) and an external tube (2),
the slide (6) being designed as a sliding sleeve which is located between
15 the internal tube (3) and the external tube (2),
and the slide (6) being of a two-part design
and having a closing sleeve (8) to close or open the conveying channel
(5) and a conveying sleeve (7) which is movable independently of the closing sleeve (8).
- 20 2. Device according to claim 1 characterized in
that the conveying channel (5) is reduced in stages from the first diameter
in the region of the admission opening (9) to a smaller diameter in the region of the
discharge opening (10),
the two tubes (2, 3) of the conveying channel (5) being axially movable
25 toward each other,
between a conveying position in which passage between the individual
stages of the internal tube and external tube is achieved,
and a closing position in which the stages of the internal and external
tubes (2, 3) are in close proximity such that a material flow between the stages is
30 impeded.
3. Device according to claim 1, characterized in
that one of the tubes (2, 3) forms a plug (11) for the discharge opening
(10) formed by the other tube (2, 3),
35 the tubes (2, 3) being movable toward each other between an opening
position and a closing position as desired to open or close the discharge opening (10).

4. Device according to claim 1, characterized in that the internal tube is designed as a solid, rod-type or cylindrical component.
- 5 5. Device according to claim 1, characterized in that the heating devices (12) are arranged radially inside and outside the conveying channel (5).
- 10 6. Method for melting and conveying material, such as plastic or metal, the material being introduced through an admission opening (9) into a conveying channel (5), subsequently conveyed through the conveying channel (5), and finally discharged from this channel through discharge opening (10), the material being moved by a slide (6) which pushes the material from the admission opening (9) to the discharge opening (10),
- 15 and the material being heated while located in the conveying channel (5) by heating devices (12) which are located between the admission opening and discharge opening (9, 10), and being at least partially melted, the material being conveyed through narrowings formed in the conveying channel (5).
- 20 7. Method according to claim 6, characterized in that the material is conveyed through a conveying channel (5) with an annular cross section and is heated radially from outside the annular cross section and radially from inside the annular cross section.
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